



## TRANSMITTAL LETTER

Application of:  
Subramanian, et al.

Serial No.: 10/070,282

Filing Date: April 15, 2002

Title: QUATERNARY AMMONIUM SALTS AS  
THICKENING AGENTS FOR AQUEOUS  
SYSTEMS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Docket No.: ACA6263 US

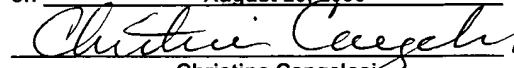
Group Art Unit: 1712

Examiner: P.C. Tucker

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on August 23, 2006

  
Christina Cangelosi

Sir:

☒ Transmitted herewith find the document(s) related to this application.

TRANSMITTAL LETTER IN DUPLICATE; SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT; PTO-1449 FORM (pages 8); DOCUMENTS (37);  
CERTIFICATE OF MAILING; AND POST CARD.

☐ Applicant hereby petitions for an extension of time under 37 CFR 1.136 of:

☐ One Month (\$120.00)

☐ Two Months (\$450.00)

☐ Three Months (\$1020.00)

☐ Four Months (\$1590.00)

The total fee believed due is \$ 180.00. Please charge this amount and any other fees,  
which may be due (including filing fees under 37 CFR 1.16 and processing fees under 37  
CFR 1.17) to Deposit Account No. 01-1350. If an extension of time is required but has not  
been requested above, Applicant hereby petitions for an extension of time sufficient for the  
attached document(s) to be timely. A duplicate copy of this sheet is enclosed.

Respectfully submitted,



Ralph J. Mancini

Attorney for Applicant(s)

Reg. No. 34,054

09/05/2006 MAILING 00000000 011350 10070282  
0152:1866 180.00 DA

Akzo Nobel Inc.  
Intellectual Property Dept.  
7 Livingstone Avenue  
Dobbs Ferry, NY 10522-3408  
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PATENT  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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*Christina Cangelosi*  
Christina Cangelosi

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the requirements of 37 CFR §1.56, applicants submit the documents attached hereto. Pursuant to the United States Patent and Trademark Office, OG Notice 05 August 2003, applicants have excluded copies of the ninety-four (94) U.S. patent documents. All documents are to be made of record in the above-identified case. A listing of said documents on form PTO-1449 is also attached.

The present Supplemental Information Disclosure Statement is being filed, pursuant to 37 C.F.R. §1.97(c), after the mailing date of the First Office Action dated November 17, 2004, but before the mailing date of any Final Action. Authorization to charge applicants' deposit account for the full amount of the fee set forth in 37 C.F.R. §1.17(p) for such filing is hereby made in the attached Transmittal Letter.

Japanese Patent Application No. JP 5-93181 is not in the English language, however, applicants submit herewith Derwent Abstract No. JP 5093181.

Japanese Patent Application No. JP 9-3491 is not in the English language, however, applicants submit herewith Derwent Abstract No. JP 9003491.

Japanese Patent Application No. JP 10-197306 is not in the English language, however, applicants submit herewith Derwent Abstract No. JP 10197306.

PCT Patent Application No. 97/33960 is not in the English language, however, applicants submit herewith Derwent Abstract No. WO 1997033960.

Japanese Patent Application No. JP 11-152493 is not in the English language, however, applicants submit herewith Derwent Abstract No. JP 11152493.

French Patent Application No. FR 2412924 is not in the English language, however, applicants submit herewith Derwent Abstract No. FR 2412924.

This statement is not intended to represent that no better art exists. Applicants reserve the right to contest the applicability of the documents attached hereto as prior art in the event that any information is discovered which demonstrates that said documents do not qualify as prior art.

Consideration of the present Information Disclosure Statement is respectfully requested. The claimed invention is, however, deemed to represent a patentable departure from the teachings of the prior art.

Respectfully submitted,



Ralph J. Mancini  
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**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

PTO-1449 (modified)



Atty. Docket #

ACA 6263 US

Serial No.

10/070,282

Applicant

Shankar Subramanian et al.

Filing Date

April 15, 2002

Group Art Unit

1712

**U.S. PATENT DOCUMENTS**

Init	Document No.	Issue Date	Name	Class	Subclass	Filing Date
	2,748,139	5/29/1956	Scudi et al.	260	295.5	
	3,306,858	2/28/1967	Oberle	252	99	
	3,849,348	11/19/1974	Hewitt et al.	252	547	
	4,077,990	3/7/1978	Prodo et al.	260	404.5	
	4,113,631	9/12/1978	Thompson	252	8.55	
	4,654,158	3/31/1987	Shepherd, Jr.	252	91	
	4,737,296	4/12/1988	Watkins	252	8.553	

**FOREIGN PATENT DOCUMENTS**

	Document No.	Publ. Date	Country	Class	Subclass	Translation	
						Y	N
	GB 1 212 782	11/18/70	Great Britain	C08G	17/16		
	GB 1 404 335	08/28/75	Great Britain	F17D	5/02		
	GB 2 018 863 A	10/24/79	Great Britain	E21B	43/27		
	GB 2 119 358 A	11/16/83	Great Britain	C04B	21/00		
	EP 0 070 076 A2	01/19/81	Europe	C11D	1/86		
	EP 0 474 284 A1	03/11/92	Europe	E21B	43/22		
	JP 5-93181	04/16/93	Japan	C09K	3/00		X

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

	Derwent Abstract of JP 5093181

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<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)  PTO-1449 (modified)	<b>Atty. Docket #</b>  ACA 6263 US	<b>Serial No.</b>  10/070,282
	<b>Applicant</b> Shankar Subramanian et al.	
	<b>Filing Date</b> April 15, 2002	<b>Group Art Unit</b> 1712

**U.S. PATENT DOCUMENTS**

Init	Document No.	Issue Date	Name	Class	Subclass	Filing Date
	4,745,976	5/24/1988	Harwell et al.	166	273	
	4,806,256	2/21/1989	Rose et al.	252	71	
	4,960,934	10/2/1990	Smith et al.	564	298	
	5,101,903	4/7/1992	Llave et al.	166	294	
	5,149,463	9/22/1992	Peterson	252	301.21	
	5,246,698	9/21/1993	Leshchiner et al.	424	78.08	
	5,462,698	10/31/1995	Kobayakawa et al.	252	586	
	6,177,388 B1	1/23/2001	Cheung et al.	510	101	
	6,239,183 B1	5/29/2001	Farmer et al.	516	102	
	6,506,710 B1	1/14/2003	Hoey et al.	507	242	

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	Document No.	Publ. Date	Country	Class	Subclass	Translation	
						Y	N
	JP 9-3491	1/7/1997	Japan	C11D	1/94		X
	JP 10-197306	7/31/1998	Japan	G01F	1/68		X
	WO 94/17154	8/4/1994	PCT	C09K	7/08		
	WO 97/33960	9/18/1997	PCT	C11D	1/75		X

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

Derwent Abstract of JP 9003491
Derwent Abstract of JP 10197306
Derwent Abstract of WO 1997033960

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	4,107,328	8/15/1978	Michaels	424	316	
	4,587,030	5/6/1986	Casey	252	92	
	5,263,540	11/23/1993	Dovan et al.	166	278	
	5,441,664	8/15/1995	Blanvalet et al.	252	117	
	5,580,849	12/3/1996	Dyet et al.	510	427	
	5,678,632	10/21/1997	Moses et al.	166	307	
	5,797,456	8/25/1998	Mokadam	166	307	
	5,919,312	7/6/1999	Wierenga et al.	134	34	
	5,998,347	12/7/1999	D'Ambrogio et al.	510	237	
	6,153,572	11/28/2000	Stamm	510	193	

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						Y	N
	GB 2 354 541 A	6/28/2001	Great Britain	E21B	43/26		
	JP 11-152493	6/8/1999	Japan	C11D	1/75		X
	WO 00/17303	3/30/2000	PCT	C11D	11/00		
	WO 01/07010 A1	2/1/2001	PCT	A61K	7/50		
	WO 01/30950 A1	5/3/2001	PCT	C11D	1/72		
	WO 01/81499 A2	11/1/2001	PCT	C09K	7/00		

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

Derwent Abstract of JP 11152493	
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Init	Document No.	Issue Date	Name	Class	Subclass	Filing Date
	6,244,343 B1	6/12/2001	Brothers et al.	166	293	
	6,277,803 B1	8/21/2001	Tarng et al.	510	237	
	6,306,800 B1	10/23/2001	Samuel et al.	507	129	
	6,313,084 B1	11/6/2001	D'Ambrogio et al.	510	425	
	6,350,721 B1	2/26/2002	Fu et al.	507	242	
	6,645,912 B1	11/11/2003	Mille et al.	504	206	
	6,703,352 B2	3/9/2004	Dahayanake et al.	507	241	
	7,060,661 B2	6/13/2006	Dobson, Sr. et al.	507	245	
	6,831,108 B2	12/14/2004	Dahanayake et al.	516	69	
	2003/0019627 A1	1/30/2003	Qu et al.	166	281	
	2004/0176478 A1	9/9/2004	Dahayanake et al.	516	77	
	4,604,424	8/5/1986	Cole et al.	524	862	

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	Document No.	Publ. Date	Country	Class	Subclass	Translation	
						Y	N
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	WO 01/18147 A1	3/15/2001	PCT	C09K	7/02		
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	FR 2412924	7/20/1979	France	H01G	4/18		X

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	Kalur et al., "Viscosity Increase with Temperature in Cationic Surfactant Solutions Due to the Growth of Wormlike Micelles," Langmuir November 22, 2005, vol. 21, no. 24, pages 10998-11004
	Derwent Abstract of FR 2412924

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Init	Document No.	Issue Date	Name	Class	Subclass	Filing Date
	4,772,644	9/20/1988	Itoh et al.	523	443	
	4,782,893	11/8/1988	Thomas	165	185	
	5,781,412	7/14/1998	de Sargo	361	704	
	5,075,038	12/24/1991	Cole et al.	252	514	
	5,049,943	9/17/1991	Menjo et al.	355	284	
	3,323,593	3/16/1964	Foshee et al.	166	42	
	3,625,284	12/7/1971	Gogarty et al.	166	273	
	3,637,015	1/25/1972	Holm	166	273	
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	3,670,819	6/20/1972	Dauben et al.	166	305 R	
	3,677,343	7/18/1972	Showalter	166	252	
	3,797,574	3/19/1974	Feuerbacher et al.	166	274	

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	Document No.	Publ. Date	Country	Class	Subclass	Translation	
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	EP 0 835 983 B1	12/17/2003	European	E21B	43/26		
	WO 96/34078	10/31/1996	PCT	C11D	1/66		
	WO 03/093641 A1	11/13/2003	PCT	E21B	43/27		

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	Marczak et al., "Characterization of Surfactant Gelled Fracturing Fluids," SPE 63240; pages 1-8 (October 1-4, 2000)
	Nehmer et al., "Viscoelastic Gravel-Pack Carrier Fluid," SPE 17168; pages 217-226 (February 8-9, 1988)

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Init	Document No.	Issue Date	Name	Class	Subclass	Filing Date
	3,920,074	11/18/1975	Sarem	166	274	
	4,071,457	1/31/1978	Meister	252	8.55 D	
	4,120,356	10/17/1978	Meister	166	267	
	4,284,435	8/18/1981	Fox	134	2	
	4,287,950	9/8/1981	Baker et al.	166	273	
	4,464,268	8/7/1984	Schievelbein	252	8.55 B	
	4,514,310	4/30/1985	Heilweil	252	8.55 R	
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	4,624,314	11/25/1986	Clark	166	271	
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	Raghavan et al., "Highly Viscoelastic Wormlike Micellar Solutions Formed by Cationic Surfactants with Long Unsaturated Tails," Langmuir pages 300-306 (2001)
	Stewart et al., "Use of Solids-free Viscous Carrying Fluid in Fracturing Applications: An Economic and Productivity Comparison in Shallow Completions," SPE 30114; pages 379-392 (May 15-18, 1995)
	Hoffmann, "Viscoelastic Surfactant Solutions," American Chemical Society, Structure and Flow in Surfactant Solutions; Ch. 1; (1994)
	Muzyczko et al., "Fatty Amidoamine Derivatives: N,N-Dimethyl-N-(3-alkylamidopropyl)amines and Their Salts," Journal of American Oil Chemists Society; pages 720-725 (November 1968)

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	4,775,489	10/4/1988	Watkins et al.	252	8.552	
	4,979,564	12/25/1990	Kalpakci et al.	166	273	
	5,104,556	4/14/1992	Al-Yazdi	252	8.552	
	5,246,072	9/21/1993	Frazier, Jr. et al.	166	273	
	5,374,361	12/20/1994	Chan	507	211	
	5,388,646	2/14/1995	Hensley	166	271	
	5,458,197	10/17/1995	Chan	166	304	
	5,458,198	10/17/1995	Hashemi et al.	166	312	
	5,501,276	3/26/1996	Weaver et al.	166	291	
	5,551,516	9/3/1996	Norman et al.	166	308	
	5,564,500	10/15/1996	Rogers et al.	166	312	
	5,595,243	1/21/1997	Maki, Jr. et al.	166	177.2	
	5,602,083	2/11/1997	Gabrysch et al.	507	200	
	5,607,905	3/4/1997	Dobson, Jr. et al.	507	211	
	5,627,144	5/6/1997	Urfer et al.	507	211	

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	5,670,460	9/23/1997	Neely et al.	507	203	
	5,678,631	10/21/1997	Salisbury et al.	166	304	
	5,830,831	11/3/1998	Chan et al.	507	211	
	5,977,032	11/2/1999	Chan	507	211	
	6,435,277 B1	8/20/2002	Qu et al.	166	281	
	6,972,274 B1	12/6/2005	Slikta et al.	507	240	
	4,061,580	12/6/1977	Jahnke	252	8.55 R	
	4,148,736	4/10/1979	Meister	252	8.55 R	
	4,591,447	5/27/1986	Kubala	252	8.55 C	
	4,898,725	2/6/1990	Hoeffkes et al.	424	70	
	5,019,281	5/28/1991	Singer et al.	252	8.8	
	5,964,295	10/12/1999	Brown et al.	166	308	
	5,979,557	11/9/1999	Card et al.	166	300	
	6,112,814	9/5/2000	Chan et al.	166	304	
	6,169,058 B1	1/2/2001	Le et al.	507	222	
	6,964,940 B1	11/15/2005	Treybig et al.	507	129	

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